UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/450,584	11/30/1999	SHIGERU TSUKIMURA	046601-5034	7883

9629	7590	12/14/2004

MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER
POKRZYWA, JOSEPH R

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 July 2004</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-9</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-9</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage

        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) ☐ Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date _____ .	6) ☐ Other: _____ .

DETAILED ACTION

Response to the Request for Reconsideration

1.   Applicant's request for reconsideration was received on 7/8/04, and has been entered and made of record. Currently, **claims 1-9** are pending.

Response to Arguments

2.   Applicant's arguments filed 7/8/04 have been fully considered but they are not persuasive.

3.   In response to applicant's arguments regarding the rejection of independent *claims 1, 2, 6, 7, and 9*, cited as being anticipated by Coleman (U.S. Patent Number 5,784,172), whereby applicant argues on page 3 that Coleman fails to teach of adding color materials "regardless of contents of the image data in a background of black area", as Coleman selectively removes a certain set of image data from going through image analysis, as seen in step S410 of Fig. 9. Thus, as argued by applicant, if Coleman detects an input data composed of only single-color black, such as text in black color, this data will be bypassed from further color analysis.

4.   Currently, claim 1 requires "an input part to which image data represented by a plurality of colors including black is input". Thus the input data would not be composed of only single-color black, such as text, unless there is a plurality of additional colors included in the image data. As read in column 6, lines 59-64 of Coleman, process black may be constructed when "K=1 and C, M, and/or Y are non-zero". With this, if black text (K=1) is to printed over a

magenta and yellow background (C=0, M=1, Y=1), therein being a plurality of colors including

black, as required in the claim, the decision of step S410 in Fig. 9 would be "yes".

5.   Continuing, as seen in Fig. 2 of Coleman, and read in column 3, line 66-column 4, line 8,

as well as in column 6, lines 57-64, the contents of "the image data in a background of black

area" can be various values of C, M, or Y, as long as at least one is non-zero. Therefore,

Coleman's process occurs "regardless of contents of the image data in a background of the black

area", as required in the current claim language. With this, Coleman teaches of adding color

materials, except a black material, of a predetermined amount to the black area regardless of

contents of the image data in a background of the black area, as read in column 4, lines 39-42,

and column 8, lines 4-25, and subsequently outputting the color materials and the black material,

as seen in step S60 of Fig. 8.

6.   Therefore, the rejection of independent **claims 1, 2, 6, 7, and 9**, as well as dependent

claims 3 and 8, which were cited under 35 U.S.C.102(b), as being anticipated by Coleman, are

maintained and repeated in this Office action. Similarly, for the same reasons discussed above,

the rejection of dependent **claims 4 and 5**, which were cited under 35 U.S.C. 103(a), as being

unpatentable over Coleman in view of Dermer *et al.* (U.S. Patent Number 5,313,570), is also

maintained and repeated in this Office action.

Claim Rejections - 35 USC § 102

7.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8.   **Claims 1-3, and 6-9** are rejected under 35 U.S.C. 102(b) as being anticipated by Coleman (U.S. Patent Number 5,784,172, cited in the Office action dated 10/22/03).

Regarding *claim 1*, Coleman discloses an image processing device (see Figs. 6 and 7) comprising an input part to which image data represented by a plurality of colors including black is input (step S405 in Fig. 9, see abstract, and column 3, line 60 through column 4, line 39), a black area detector that detects a black area in the image data (step S410 in Fig. 9, see abstract, and column 6, line 57 through column 7, line 40), and an output part that adds color materials, except a black material, of a predetermined amount to the black area regardless of contents of the image data in a background of the black area and outputs the color materials and the black material (step S460, and column 4, lines 27 through 47, wherein a process black section will be reformulated and printed with high levels of non-black toners to match a surrounding area having high levels of background toner).

Regarding *claim 2*, Coleman discloses an image processing device (see Figs. 6 and 7) comprising an input part to which image data represented by a plurality of colors including black is input (step S405 in Fig. 9, see abstract, and column 3, line 60 through column 4, line 39), a black area detector that detects a black area in the image data (step S410 in Fig. 9, see abstract, and column 6, line 57 through column 7, line 40), an edge detector that detects an edge of the black area (step S440 in Fig. 9, column 7, lines 41 through 61), and an output part that adds color materials, except the black material, of a predetermined amount to the black area except the edge

regardless of contents of the image data in a background of the black area and outputs the color

materials and the black material (step S460, and column 4, lines 27 through 47, wherein a

process black section will be reformulated and printed with high levels of non-black toners to

match a surrounding area having high levels of background toner).

Regarding *claim 3*, Coleman discloses the device discussed above in claim 2, and further

teaches of an adjuster that adjusts the amount of the color materials except the black material

added to the edge in case a total amount of the color materials and the black material to be output

to the edge exceeds a predetermined amount (column 4, lines 27 through 47, and column 8, line

4 through column 9, line 35).

Regarding *claim 6*, Coleman discloses an image processing method (see Fig. 9)

comprising the steps of inputting image data represented by a plurality of colors including black

(step S405, see abstract, and column 3, line 60 through column 4, line 39), detecting a black area

in the image data (step S410, see abstract, and column 6, line 57 through column 7, line 40), and

adding color materials, except a black material, of a predetermined amount to the black area

regardless of contents of the image data in a background of the black area and outputs the color

materials and the black material (step S460, and column 4, lines 27 through 47, wherein a

process black section will be reformulated and printed with high levels of non-black toners to

match a surrounding area having high levels of background toner).

Regarding *claim 7*, Coleman discloses an image processing device (see Figs. 6 and 7)

comprising an input part to which image data represented by a plurality of colors including black

is input (step S405 in Fig. 9, see abstract, and column 3, line 60 through column 4, line 39), a

black area detector that detects a black area in the image data (step S410 in Fig. 9, see abstract,

and column 6, line 57 through column 7, line 40), an image determination unit that determines a

type of an image in each area in the image data (step S440 in Fig. 9, column 5, lines 13 through

24, and column 7, line 34 through column 8, line 8), and an output part that adds color materials,

except a black material, of a predetermined amount to an area determined to hold a

predetermined type by the image determination unit and detected as a black area by the black

area detector regardless of contents of the image data in a background of the black area and

outputs the color materials and the black material (step S460, and column 4, lines 27 through 47,

wherein a process black section will be reformulated and printed with high levels of non-black

toners to match a surrounding area having high levels of background toner).

Regarding *claim 8*, Coleman discloses the device discussed above in claim 7, and further

teaches that the output part adds color materials, except the black material, of a predetermined

amount to an area determined to hold a character by the image determination unit and detected as

a black area by the black area detector regardless of contents of the image data in a background

of the black area and outputs the color materials and a black material (steps S410-S460, column

4, lines 27 through 47, and column 6, line 65 through column 8, line 8, whereby a process black

section will be reformulated and printed with high levels of non-black toners to match a

surrounding area having high levels of background toner).

Regarding *claim 9*, Coleman discloses an image processing method (see Fig. 9)

comprising the steps of inputting image data represented by a plurality of colors including black

(step S405, see abstract, and column 3, line 60 through column 4, line 39), and adding color

materials, except a black material, of a predetermined amount to an area determined to hold a

predetermined image type and detected as a black area from among areas in the image data

regardless of contents of the image data in a background of the black area and outputting the

color materials and the black material (steps S410-S460, column 4, lines 27 through 47, and

column 6, line 65 through column 8, line 8, whereby a process black section will be reformulated

and printed with high levels of non-black toners to match a surrounding area having high levels

of background toner).

Claim Rejections - 35 USC § 103

9.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

10.   **Claims 4 and 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman

(U.S. Patent Number 5,784,172, cited in the Office action dated 10/22/03) in view of Dermer *et*

al. (U.S. Patent Number 5,313,570, cited in the Office action dated 10/22/03).

Regarding *claim 4*, Coleman discloses the device discussed above in claim 1, and further

teaches that the output part is based upon primary colors of black, yellow, magenta and cyan (see

abstract, column 6, lines 44 through 64, and column 8, lines 26 through 55), and an amount of

each color material of the Y, M, C is output to the black area (column 4, lines 27 through 47, and

column 8, line 26 through column 9, line 35). However, Coleman does not specifically teach if

the amount of each color material of the Y, M, C is output to the black area *in a range of 10 to*

40% (percentage by weight) of the amount of black material.

Dermer discloses an image processing device (see Fig. 1) comprising an input part to

which image data represented by a plurality of colors including black is input (see Fig. 1), a

detector that detect boundary areas in the image data (see abstract), and an output part that adds

color materials, except a black material, of a predetermined amount to the detected area

regardless of contents of the image data in a background of the area and outputs the color

materials and the black material (column 19, line 8 through column 20, line 54). Further, Dermer

teaches that the output part is based upon primary colors of black, yellow, magenta and cyan, and

an amount of each color material of the Y, M, C is output to the black area in a range of 10 to

40% (percentage by weight) of the amount of black material (column 19, line 8 through column

20, line 54, and seen in Fig. 24, whereby the output part outputs Y, M, C materials in any

specified range, included within the range of 10 to 40% percentage by weight).

Coleman & Dermer are combinable because they are from the same field of endeavor,

being printing systems that process images having input data with a plurality of colors. At the

time of the invention, it would have been obvious to a person of ordinary skill in the art to use

the range of color material indicated by Dermer within the system of Coleman. The

suggestion/motivation for doing so would have been that Coleman's system would be capable of

printing more colors, since different combinations of colors, as well as tints and degredes, can be

achieved by varying the weight percentages of each ink, as recognized by Dermer in column 19,

lines 8-26. Therefore, it would have been obvious to combine the teachings of Dermer with the

system of Coleman to obtain the invention as specified in claim 4.

Regarding *claim 5*, Coleman and Dermer disclose the device discussed above in claim 4,

and Coleman further teaches of a reduction unit that reduces the amount of the color material of

the Y, M, C, keeping the amount of the black material in case a total amount of the color

materials of K, Y, M, C exceeds a predetermined value (column 4, lines 27 through 47, and

column 8, line 4 through column 9, line 35).

Conclusion

11.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing
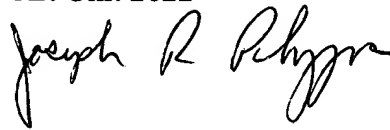
date of this final action.

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joe Pokrzywa whose telephone number is (703) 305-0146. The

examiner can normally be reached on Monday-Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward L. Coles can be reached on (703) 305-4712. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph R. Pokrzywa
Examiner
Art Unit 2622

jrp